

Docket No. P05146-US
Serial No. 10/804,153

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AMENDMENTS TO THE CLAIMS:

Please amend the claims as

- 1-7. (Canceled)
8. (Currently Amended) An optical waveguide ~~at least~~ comprising:
a core; and
a clad,
wherein the core is patterned by using a photomask, and
wherein a width of a part of the photomask corresponding to the core
is wider than a design width of the core.
9. (Currently Amended) An optical waveguide as claimed in claim 8, wherein the
width of the part of the photomask that corresponds to the core is more than 0.5 μ m wider
than the design width of the core.
10. (Currently Amended) An optical waveguide at least comprising:
a core; and
a clad,
wherein a design width of the core, d, is represented by the formula:
$$d < 1.45\lambda / (2(\sqrt{(n_{\text{core}}^2 - n_{\text{clad}}^2)}))$$

where a refractive index of the core is n_{core} , a refractive index of the clad
is n_{clad} , and a cutoff wavelength of the optical waveguide is λ , and a width M of a
corresponding part of a masking layer that patterns the core is represented by the formula:
$$M > 1.45\lambda / (2(\sqrt{(n_{\text{core}}^2 - n_{\text{clad}}^2)})).$$
11. (Previously Presented) An optical waveguide as claimed in claim 10, wherein the
cutoff wavelength is 80 to 90% of a wavelength in use.